REMARKS

In the Office Action dated June 10, 2005, claims 1-6 were rejected under 35 U.S.C. §112, second paragraph as being indefinite, for several reasons.

As to the lack of antecedent basis in claims 1 and 5, those claims have been editorially amended so that antecedent basis is present for all terms. As to claim 2, the term "detector" has antecedent basis in line 15 of original claim 1 and therefore, although claim 2 has been editorially amended for other reasons, there is no need to amend claim 2 to provide antecedent basis for the term "detector."

The Examiner also identified certain claim language that the Examiner considered to be indefinite. Claims 1, 2, 3, and 6 have been amended to clarify the language questioned by the Examiner. Those claims also have been amended to make clear that the various claimed computer workstations are for the purpose of processing medical examination images, and the work load management that takes place is to manage the processing of these medical examination images.

In general, each workstation has a work list wherein the number of tasks (such as the number of medical examination images to be processed) that are pending at that particular workstation are listed. As set forth in independent claim 1, each of the workstations contains a work list management unit, which in turn has a detector, that determines usage of that computer workstation dependent on the stored work list therein, and that emits a detector output signal representing that usage of the computer workstation. At least one of the computer workstations, or the further computer workstation, has a task generator that receives the detector output signal, and this task generator manages the usage of the computer workstations and

the further computer workstation to process the medical examination images dependent on the received signal.

As set forth in dependent claims 2 and 3, and independent method claim 6, the output signal that is generated by the detector is the result of a comparison of the number of tasks (examination images to be processed) in the work list with a work load level and a saturation level. If the number of tasks in the work list is below the work load level, this indicates that the workstation is available to process more medical examination images, and therefore a request signal is transmitted, as the aforementioned output signal to the task generator, to request that more medical examination images be sent to that workstation. By contrast, if the number of pending tasks (examination images to be processed) at a particular workstation exceeds the saturation level, this means that the workstation cannot accept any more tasks (medical examination images), and thus emits a saturation signal, as the aforementioned detector output signal, to the task generator, and the task generator then inhibits transmission of any further medical examination images to that workstation.

Original claims 1-6 were rejected under 35 U.S.C. §103(a) as being unpatentable over Watson et al., in view of Fuchs. Applicant submits that amended claims 1-6 would not have been obvious to a person of ordinary skill in the field of medical system architecture design based on the teachings of those references, for the following reasons.

The Watson et al. reference discloses a general-purpose data processing system that makes use of packets that identify functions and rules so as to avoid inefficient processing and redundant actions. In the Watson et al. reference, there

are no modalities for acquiring medical examination images, but only nodes of a processor and a local memory. Because there is no need to transmit images from one location to another in the Watson et al. reference, there is no transmission device disclosed in the Watson et al. reference, but only an interprocessor network.

Moreover, in the subject matter disclosed and claimed in the present application, there is a memory for the medical examination images that is in communication with the transmission device, and that is accessible by all workstations. By contrast, in the Watson et al. reference, each processor accesses a local memory for divided packets.

The subject matter of the present application includes a number of computer workstations as well as a further computer workstation, but the Watson et al. reference only discloses further nodes with a processor and a local memory.

As noted above, each computer workstation has a work list management unit that stores the aforementioned work list therein. In the Watson et al. reference, there is a FIFO memory that serves as an active packet queue (APQ). An active packet scheduler (APS) transfers packet addresses to a packet processing unit (PPU), which accesses the packets from the local memory and processes those packets.

The subject matter disclosed and claimed in the present application, moreover, requires a task generator. The component that the Examiner has identified as allegedly corresponding to a task generator is the network 13, and Applicant finds no teaching or suggestion in the Watson et al. reference that this network could serve as a task generator for managing the processing of medical examination images, as disclosed and claimed in the present application.

In the subject matter disclosed and claimed in the present application, moreover, an evaluation device manages the work loads of the respective workstations, with regard to the processing of medical examination images therein, dependent on the aforementioned signals received from the respective workstations, in particular the detector output signals of the work list management unit in each workstation.

By contrast, the APS in each node of the system disclosed in the Watson et al. reference generates a local activity level signal that indicates the current work load at that node. The network receives these signals from all of the nodes, and generates a global activity level signal, which is returned to all of the nodes. There is no evaluation or managing the usage associated with the generation of the global activity level signal; it is purely informational.

In general, the Watson et al. reference discloses a work load balancing system that distributes divided computer instructions in a multi-processor system with many CPUs on an operating system level. Significantly in contrast thereto, the subject matter disclosed and claimed in the present application distributes complete tasks (processing of individual medical examination images) to radiologists respectively working at different workstations by management of a work list on an application level, rather than on an operating system level.

Moreover, the Watson et al. system is not for the purpose of evaluating medical examination images, and therefore does not disclose or suggest techniques for managing work loads associated with processing of such medical examination images. The Examiner has relied on the Fuchs reference as teaching a medical system, and concluded it would have been obvious to a person of ordinary skill to

combine the teachings of Watson et al. and Fuchs because the teaching in the Fuchs reference of using the system described therein as a medical system would increase the field of use in system disclosed in the Watson et al. reference. Applicant does not agree with this conclusion, either as a general proposition or specifically regarding the teachings of the Fuchs reference.

If the Examiner's position is adopted, this would essentially give the Watson et al. patent the ability to obviate almost every application dealing with work load distribution in a computer system of any type. Applicant respectfully submits the Watson et al. reference is much more confined in its teachings and, as noted above, most importantly is directed to the distribution of CPU instructions at an operating system level. The Fuchs system, by contrast, is directed to distributing image data for the purpose of optimizing the storage space that is available among different storage locations for such data. Since the CPU instructions in the Watson et al. reference, as noted above, are in the form of packets, and cannot be arbitrarily stored at whatever storage space happens to be available for the most efficient use of the system, but must instead be directed to the appropriate location, it is not even seen conceptually how the teachings of Fuchs could be put to use in the Watson et al. system. Applicant respectfully submits that if a person of ordinary skill in the field of designing computer system architectures have the insight to realize that the teachings in the Fuchs reference relating to optimization of storage space could be used in the system for distributing CPU instructions disclosed in the Watson et al. reference, this would be an insight supporting patentability, rather than negating patentability.

More importantly, however, for the reasons noted above, Applicant submits that even if such a modification of the Watson et al. reference were made in accordance with the teachings of the Fuchs reference, the subject matter of claims 1-6 still would not result. In general, the subject matter disclosed and claimed in the present application is a method and system for distributing medical tasks (processing of medical examination images) according to available work loads at different computer workstations, whereas the Fuchs reference is directed to optimization of memory storage space in a computerized archiving system, and the Watson et al. reference is directed to distributing CPU instructions to the proper recipients. Applicant finds no interrelationship between any of these disparate purposes, and therefore submits that the subject matter of claims 1-6 would not have been obvious to a person of ordinary skill in the field of computer architecture design, based on the teachings of Watson et al. and Fuchs.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

Submitted by,

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